A review by the **Federal Reserve Bank of Chicago**

Business Conditions

1954 June

Contents

THE Trend OF BUSINESS

The second quarter of 1954 is bringing a crop of inconclusive and sometimes contradictory information regarding the state of business. Some promising recent developments must be read in terms of seasonal influences and long-term growth tendencies which may obscure short-term weaknesses. Moreover, relatively stable aggregates of output or sales may conceal sharp changes in components.

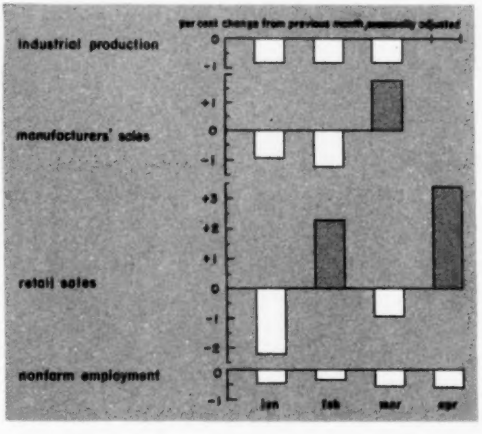
Erosion of employment and payrolls apparently continues, but measures indicating more stable conditions in certain segments of the economy are not hard to find. Manufacturers' total sales and new orders rose appreciably in March to end a long succession of declines, and retail buying responded sufficiently well in April to largely offset a poor March.

Many individuals are unimpressed with the recitation of national or regional totals which are at variance with personal experience. The decline in activity thus far has varied greatly between communities and areas, between industries and between firms within industries. For example, two large automobile manufacturers have produced more cars this year than last, whereas certain other firms have turned out only one-third as many. It makes a difference whose profits dry up, whose job is lost, "whose ox is gored."

Experience in most manufacturing lines is significantly worse than for the economy as a whole. In April, factory output was off about 10 per cent from the previous year, and the durable goods segment had declined 13 per cent. In capsule form these figures indicate why the Midwest has experienced a more than proportional drop-off. Automobiles, farm machinery, steel products, electrical goods, railroad rolling stock, ordnance and certain types of machinery, so important in this area, are among the durable goods industries which have declined far more than the aggregates. The more dependent a community is upon such industries the greater the impact of the recession. This fact is magnified in cases where local firms are not in a strong competitive position.

The steady introduction of new and improved equipment and methods together with a natural tendency for employees to put forth greater effort in the face of a looser labor market shows up increasingly in greater productivity. This is true in nonmanufacturing lines, but the phenomenon is easier to document in the case of the factories. Production worker employment, in April, was down about 10 per cent from a year ago, the same as output. In addition, however, almost two full hours were clipped from the average work week which fell from 40.8 to 39 hours. As a result, the

Bouncing on the bottom?



number of man-hours in manufacturing was down 13 per cent. Elimination of overtime has been more than sufficient to wipe out many appreciable wage increases granted in the past year.

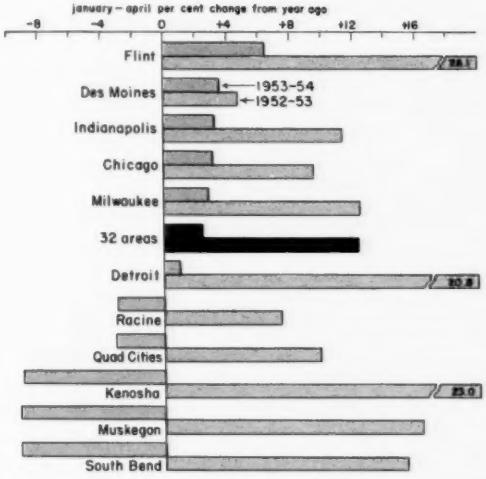
Starting with last December, sizable declines relative to year-ago totals have been noted in nonfarm wage and salary employment. Until March the drop was accounted for entirely by the manufacturing category. By April, the gap in the total from a year ago had grown to 1.7 million, a reduction of about 3.5 per cent on a seasonally adjusted basis. About 250,000 of this drop represented employees of nonmanufacturing firms.

During the two-month period from mid-February to mid-April, total nonfarm wage and salary employment, seasonally adjusted, declined by over 500,000. Less than half of this drop occurred in manufacturing. In April, only construction, farming, finance, state and local government and certain trade and service lines reported employment equal to or in excess of year-ago totals. Aside from construction, many of the new jobs are associated with low pay. To a large extent, gains represented the filling of positions which could not be staffed in the highly competitive labor market of a year ago.

Although Midwest business on the whole has declined more than for the nation since last year, this is not true in all communities. Employment in Des Moines, Madison, Springfield, Lansing and Saginaw, for example, has changed little during this period. In most cases these cities have avoided heavy dependence upon durable goods lines. Other smaller cities such as Kenosha, Racine, Quad Cities, Peoria, Rockford, South Bend, Fort Wayne, Battle Creek, Jackson and Muskegon among others have witnessed a substantial shrinkage of jobs. Unfavorable developments in these communities relate mainly to automobiles, farm machinery and ordnance. Growth in unemployment has been moderated by out-migration in some cities.

The latest employment information available for most cities covers March of this year. However, the indication is that little change has occurred since then with seasonal increases in nonmanufacturing lines offsetting further drops in factory employment.

Checkbook transactions reflect activity changes



Flint stands out as a strong swimmer against the current. Employment has actually gained appreciably over a year ago in that city, although unemployment has risen somewhat as a result of in-migration from less-favored areas. Flint's prosperity is closely tied with an excellent sales total for Chevrolets and Buicks, its principal products, plus extensive defense work in progress.

Detroit unemployment numbers about 135,000 compared with 20,000 a year before. As a proportion of the labor force, the jobless total rose from 1.3 to 9 per cent. The great bulk of the city's fall in jobs came in the automotive industry which was employing about 100,000 or 20 per cent less than a year before. Lower income has affected department store sales, which were off 8 per cent in the first four months.

Chicago has relinquished its place as the nation's tightest large labor market. Unemployment in March and April was estimated at

130,000 or 4.9 per cent compared with 40,000 or 1.5 per cent in early 1953. A number of durable goods industries have accounted for most of the layoffs in this area. Nevertheless, the great size and diversification of the Chicago area which contains over 2.6 million job holders has meant that the employment decline has amounted to 2 or 3 per cent compared to a 9 per cent drop in Detroit. As a result, retail sales, auto registrations and housing starts have been affected very little.

Milwaukee income and employment have held up surprisingly well considering the role of durable goods in the business decline. Nevertheless, unemployment had risen to 24,000 in March from 10,000 a year before, and reached 5.7 per cent of the labor force. Despite this fact department store sales were about equal to last year through the middle of May.

Indianapolis continued to establish local employment records through last December, but deterioration has been appreciable in the first quarter of this year. Unemployment was estimated at over 17,000 or 5.5 per cent of the labor force compared with 6,000 a year before. The decline is traced to lowered demand for a variety of producer and consumer durable goods.

BUILDING

Construction props business activity

Amidst a procession of data indicating declines from year-ago levels in business activity, construction volume continues to gain. Moreover, reports from builders and lenders, compilations of contract awards and indications of a growing volume of "fix up" and "add on" expenditures suggest that 1954 as a whole will see total outlays for new construction approximating 1953's record.

For the first four months of 1954, total new construction was estimated at 10.1 billion dollars, slightly above the record total of the same period last year. Seasonally adjusted this volume indicates an annual rate of over 36 billion dollars. If this rate continued through the year, 1954 would be the greatest construction year in history.

The contribution of construction

In recent years outlays on new construction have amounted to about 10 per cent of total national product. Moreover, about 5 per cent of all wage and salary workers are employed directly on contract construction, although this proportion runs somewhat less in Seventh District states. In addition, perhaps as many workers are engaged in manufacturing and transporting the materials used in construction. Virtually all of the nation's production of lumber, bricks and cement and a large share of all steel, paint and glass are channeled to the construction industry.

Construction includes, in addition to housing, all public, commercial and industrial buildings, as well as bridges, dams, highways and similar items. The drilling of oil wells is sometimes included also. The composition of last year's construction total and the estimates of the Department of Commerce and Labor for this year are given below:

	1953	1954 est.	Per cent of total	Change 1953-54
	(billion dollars)			
Total construction	34.8	34.0	100	−2
Private	23.6	22.8	67	−3
Residential	11.9	11.2	33	−6
Business	8.5	8.5	25	0
Other	3.3	3.1	9	−6
Public	11.2	11.2	33	0
Nonresidential building	4.3	4.3	13	0
Military	1.3	1.2	4	−8
Highway	3.2	3.5	10	+9
Other	2.4	2.3	7	−4

Construction volume changes slowly

The construction industry is often thought of as a "boom or bust" activity. So it is over a considerable period of years, but the industry is characterized by long swings rather than

abrupt short-run changes. Much sharper year-to-year movements are noted in certain other fields such as factory output of durable goods.

Following World War I, the dollar volume of construction hit a high in 1926 and 1927, at least two years before the autumn of 1929 which marked the beginning of the depression. Total construction outlays in 1929 already were off 10 per cent from 1927. As business conditions deteriorated in the early 1930's, construction dropped at an accelerated pace until by 1933 it was less than one-fourth the 1926-27 average. The decline would have been even steeper but for the fact that public construction held up better than the private sector. As it was, the over-all decline in construction was far greater than for total activity. Construction, which had been 12 per cent of total spending for all goods and services in the middle Twenties, declined to 5 per cent in 1933.

In the business recessions of 1937-38 and 1948-49, strength in construction volume helped maintain total activity. In 1938 construction spending equaled the 1937 level, and because the national product fell 6 per cent, the proportion attributable to construction rose. The same phenomenon was repeated more emphatically in 1949 when the dollar volume of construction increased moderately despite a slight drop in total activity. In both of these instances, however, a rise in public construction offset some decline in the private sphere.

Reasons for short-term stability

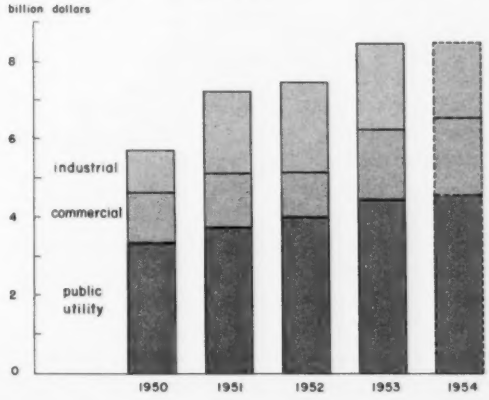
In the absence of wartime allocations, the nature of construction spending causes these outlays to move gradually up or down on a year-to-year basis although longer-term movements may be of great magnitude. First of all, new private projects are decided upon only after careful deliberation because large sums of money are involved relative to the resources of the owner. Moreover, investments in brick and mortar are "sunk" capital, and the anticipated pay-out period may stretch over many years. This is true of business and non-profit institutions as well as individuals.

Once a project has been approved, plans must be drawn and accepted, bids received, contracts let and land purchased before work is begun. Once under way it is usually wasteful to halt the operation prior to completion.

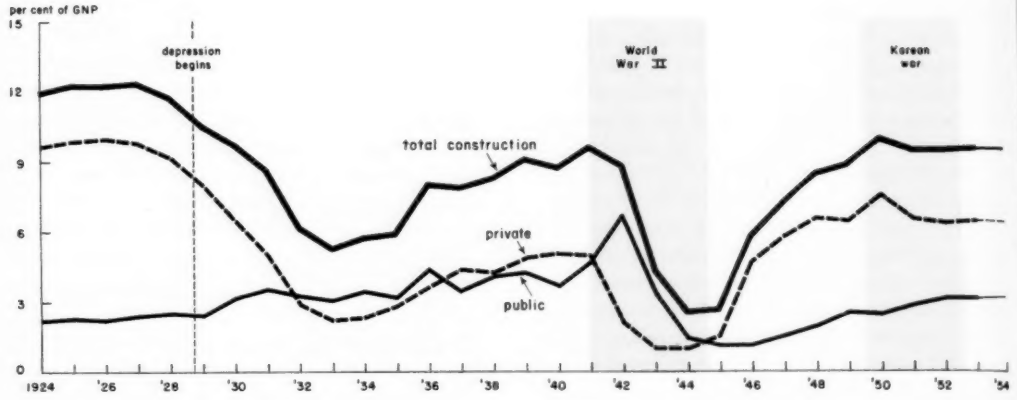
Secondly, much construction is undertaken in response to basic long-run needs which are not greatly influenced by moderate declines in business activity. Should a business downtrend continue for a period of years, all categories of private work are adversely affected because of smaller anticipated requirements and financing problems.

Third, the volume of government projects usually rises as private work begins to fall off, thereby helping to stabilize the total. There is little evidence that this phenomenon in the initial stages of past recessions has resulted from a deliberate policy designed to buoy up the economy. Rather, it has been a result of the sluggishness with which governmental bodies fill their needs for new facilities. Local governments, particularly, do not build in anticipation of requirements as business firms commonly do, but only after a need has become apparent or acute. In short, in a period of rising income the "public standard of living" does not keep pace with private growth.

Gains in commercial and utility construction expected to offset industrial slide in 1954



Construction high relative to total activity of GNP



The idea that expenditures on public works should be stepped up in periods of declining business activity has gained increasing acceptance. President Eisenhower and other administration spokesmen have frequently mentioned the importance of a "shelf" of public works in an anti-recession program. It is recognized, however, that the impact of most new projects on economic activity must await a lapse of time from the passage of enabling legislation.

In the early Thirties, when the construction industry was almost prostrate, stimulation of that sector seemed to many a logical move. At the present time construction is the strongest large component of activity. Nevertheless, it is possible that the way for the St. Lawrence Seaway bill and the billion dollar a year Federal highway program has been smoothed by the belief of some congressmen that such action would help avert a continuance of the business decline.

Seasonal trends are strong

Many Midwest cities which have witnessed a rise in unemployment since the fall of 1953 experienced some improvement in the local job market as the construction industry increased hirings in the second quarter. In most localities in this area construction employment usually is at a low ebb in the first quarter. A rise in the following months brings the total to a high in July and August. Toward the close of the year the number of workers drops off moderately until December when the decline is accelerated.

The extent of the rise from the winter low to the summer high varies greatly from year to year depending in large part upon weather conditions. An early spring, for example, will provide an opportunity to start new houses before the customary time. The extent of the seasonal upswing also varies greatly as between the North and the South and on the basis of the type of construction work which is most important in a given area. In Michigan, where industrial construction has been particularly strong in recent years, there has been little seasonal change in employment. In Iowa, however, where farm construction and highways are relatively more important, summer may find almost twice as many construction workers employed as in the previous winter.

The average number of hours worked per week in construction is also strongly affected by weather and the intensity of activity. Last January, the average work week in construction was only 33.9 hours compared with 39.4 in manufacturing. On a yearly basis the average construction week seldom exceeds 37 hours.

As a result construction workers who typically receive high hourly wage rates do not necessarily earn large annual incomes relative to skilled factory workers.

Despite the slightly higher dollar volume of construction activity in the first four months of 1954, employment in this industry has run slightly below last year. Moreover, because of a shorter work week the man-hour totals in construction have fallen even more. Larger dollar volume and fewer man-hours are not necessarily inconsistent and can be explained by increased productivity, price changes and a shift among the types of construction, some of which require more manual effort relative to value than others.

Competition much keener

In the past several months individuals interested in contracting for new construction have been gratified to find that contractors are diligently seeking new business. Activity remains at record levels, but the capacity of the nation's contractors has increased greatly during the postwar period, especially their capacity to handle large projects. This has resulted in the reception of perhaps a dozen bids on jobs which brought only one or two a year or more ago. In addition, it has become easier to obtain firm bids for work which often would have been done on a cost-plus basis in the recent past.

Highly competitive conditions in the construction industry may reverse the steady rise in the number of operating contractors since World War II. From June 1950 to the middle of last year the number of construction firms rose by 16 per cent to 434,000. During the same period the growth in the number of other types of firms was only about 3 per cent. In the first quarter of 1954, failures of contracting firms reported by Dun & Bradstreet rose by 36 per cent from the same period of last year.

Backlogs remain large

The inadequacy of the nation's highways, hospitals, schools and water and sewerage works is well known. In most cases expenditures in the postwar years have not been sufficient to regain the prewar relationship to population to say nothing of improving standards.

The depression and wartime restrictions have been responsible in part for this situation. More important, however, is the rapid growth in population coupled with the movement of both people and business firms to suburban areas which had previously serviced much smaller requirements. Satellite communities surrounding large cities are still inadequately supplied with stores, restaurants and garages as well as electric power, water and other utility and municipal services.

The larger family, including three or four children, rapidly is becoming more common with the result that demand for homes of more than two bedrooms is bound to remain strong. This can be accomplished only in part by alterations and additions to existing houses. Remodelings and modernizations for commercial establishments such as air conditioning installations, new store fronts and other projects needed to meet competitive pressures involve considerable expenditure and also will remain large. Of all the principal categories of construction activity, only the industrial and the farm sectors are substantially weaker than last year.

FARM PSYCHOLOGY

Farmers' expectations affect production plans, expenditure patterns

What to produce, and how much of it? How much to spend in that production, and for what should the money be spent? These are economic questions on which farmers as businessmen must make decisions. Of necessity, these decisions are influenced by *expectations* regarding *future* economic conditions.

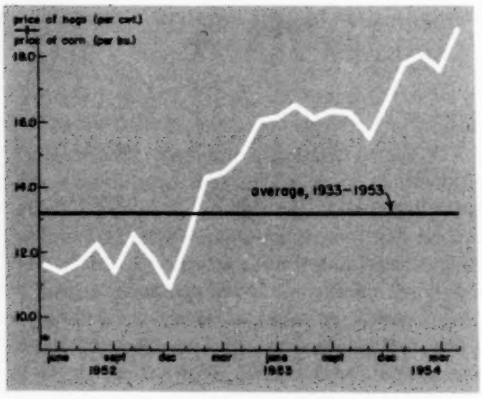
On the production side, the farmer starts with certain resources: his own time as well

as his land, buildings and machinery. Of course, he can increase his investment in these facilities if he so chooses. In any case he will try to maximize the expected revenue from what he puts into the business.

The best means of achieving that objective depends on the *alternatives* available to him. If the farmer can produce only one type of output, then expected future prices and incomes may have little effect on his production. For example, in some dairy areas the income from any activity other than dairying is so small as to provide no acceptable substitute. The land either is used in dairy farming or allowed to revert to brush and trees. In this case changes in price expectations ordinarily do not lead to shifts in type of output.

On the other hand, if attractive output alternatives *are* available, then the farmer is likely to shift from one type of output to another in response to expectations of moderate price changes. He still seeks to maximize the expected revenue from his farm facilities, but he does so by shifting his production pattern. For example, the farmer who raises corn has the alternative of either cash-grain farming or hog feeding. The corn-hog farmer can either sell corn (at present the Commodity Credit Corporation's price support loan is the best market) or feed it to hogs. Logically the decision should be based on the ratio between expected prices of hogs and corn. If the price of hogs is expected to be high in relation to corn, he steps up his hog production, and vice versa.

Hog-corn price ratio rises from 1952 low to a current level 40 per cent above average



Time lag and uncertainty

However, this involves a forecast of supply, demand and price conditions a year later. The gestation period for hogs is about four months, and the pigs are fed about seven months[1] before being marketed. So, roughly a year elapses between the time the breeding decisions are made and the time when the results of those decisions are realized. That is why *anticipated* prices are the relevant ones.

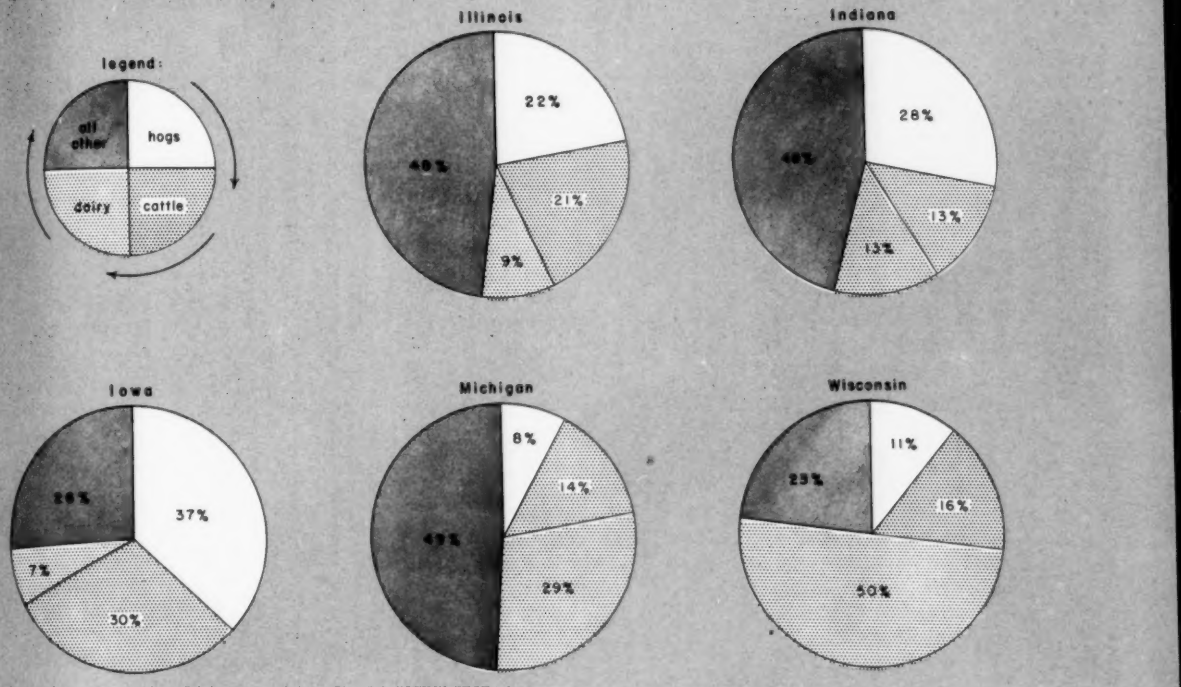
Hog farmers, like other people, are unable to forecast future prices with certainty or accuracy. Some of them react to this uncertainty simply by following the same production plan year after year. Others adjust production to the size of their corn crops. The sizable proportion who "play the market" vary their production in keeping with their price expectations.

Even the latter group typically do not have fixed and firm prices in mind. Rather, they tend to have general feelings or hunches such as: "next year hog prices will be good." These hunches are an extremely complex thing to explain, but historical evidence indicates a tendency to project prevailing prices into the future. After the price of hogs has been favorable relative to corn for approximately a year, farmers tend to believe that it will remain favorable for the foreseeable future.

They then decide to increase hog production, and about one year after these decisions are made the larger number of hogs reach markets and prices drop. After the price has stayed down for a year or so, farmers decide to cut back hog production, and a year after these decisions are made a smaller supply appears on the market and prices rise. This sequence

[1] Many farmers raise hogs to marketable weights in five to six months, but the average is longer.

Hogs, cattle and dairy account for two-thirds of farm income in the District



of events is known as the hog cycle which has been observed for decades.

Effect of the CCC

This historical pattern of fluctuations probably has been accentuated by the fact that there is a price support program for corn while there is none for hogs. Because of the CCC and its stocks, corn prices can be forecast with much more confidence than can the price of hogs. In fact, if a farmer complies with his acreage allotment on corn, is able to harvest a crop of high quality and has suitable storage space, then he can count on receiving at least the support price. The "open market" price (for corn not sealed with CCC) is less certain.

There is no support program for hogs; hence the price uncertainty is much greater than for corn. There are signs, hints and tip-offs; but almost always these are capable of being variously interpreted. The U. S. Department of Agriculture conducts and publishes a survey of farmers' intentions regarding hog breeding, but these intentions are always subject to change in the light of subsequent developments. So there is a very considerable supply uncertainty in the hog business, at least until after the breeding decisions are made. Of course, uncertainty exists on the demand side right up to the time the hogs are marketed.

Current hog prospects

Hog prices were high throughout 1953. The hog-corn price ratio was favorable to hog producers. This set the stage for decisions to increase production. For example, from December through March, sow farrowings in Iowa numbered 30 per cent more than a year

Farmers' buying psychology most optimistic in hog states, pessimistic in dairy states

	Change in land values, January to April 1954	Change in farm machinery dealers' sales, March 1953 to March 1954	Change in fertilizer sales, March 1953 to March 1954
		(per cent)	
Iowa	−1.4	− 2.7	+14.0
Indiana	−1.5	− 5.9	+ 3.9
Illinois	−2.4	− 7.6	+ 8.2
Michigan	−3.4	− 9.7	− 0.8
Wisconsin	−3.0	−12.9	− 3.5

ago. And this trend seems to be general throughout the Corn Belt. These pigs will come on the market this fall and winter, and a more than seasonal drop in price can be expected at that time.

The decisions regarding the fall pig crop are being made at this time. Because of the high hog-corn price ratio now prevailing and also because corn acreage must be reduced this year if the support price is to be obtained, it is expected that the fall pig crop will be increased and that more of this year's corn crop will be fed to hogs rather than marketed to the CCC. Those hogs will appear on the market in the spring of next year.

Prices and spending

Price expectations affect not only production plans but also spending for machinery, fertilizer, etc. Spending plans depend on both current and expected income, and the latter depends heavily on expected prices. But, as pointed out earlier, price expectations are influenced by the behavior of prices in the recent past. Thus prices received by farmers over the past year affect not only cash in hand available for spending but also expected income available for spending in the future.

Obviously, spending plans are affected most by the prices of those commodities which supply the major portion of farmers' cash receipts. In the Midwest as a whole this means hogs, cattle and dairy, ranked in that order. Together, these three products account for about two-thirds of the cash receipts from farm marketings in the Seventh Federal Reserve District. Hence, in order to gauge the spending psychology of farmers in this area it is necessary to examine the general level and trend of hog, cattle and milk prices over the past year.

In a very broad way we can characterize the farmer's evaluation of hog prices as "very good," cattle prices as "medium," and dairy prices as "poor." This is borne out by a comparison of these prices with a year ago.

Commodity	District average farm price April 15, 1954	Per cent change from year ago
Hogs, cwt.	$26.58	+27.4
Cattle, cwt.	16.80	− 0.6
Milk, cwt.	3.33	−11.0

On the basis of these prices we would expect the investment psychology of hog farmers to be quite optimistic, cattle farmers to be somewhat less optimistic and dairy farmers to be pessimistic.

Spending mood in the District

Hence it could be expected that investment in land, machinery and fertilizer by farmers in the various states would be affected by the relative importance in those states of cash receipts from the three commodities listed in the previous table. The accompanying pie charts show the proportion of farmers' cash receipts derived from these products in 1952 (the latest available data of this type).

Considering the great importance of hogs, in Iowa especially, but also in Indiana, we would expect farmer optimism to be greatest in those two states. The lesser importance of hogs in Illinois might be expected to temper the optimism there. The importance of dairying in Michigan and Wisconsin could be expected to

generate some farmer pessimism in those states, especially in Wisconsin where dairying is of overwhelming importance. Thus, in order of optimism that would be expected, the states should be ranked thus: Iowa, Indiana, Illinois, Michigan and Wisconsin.

Bank survey

Recently this Bank conducted a survey of member banks in this District regarding *bankers' opinions* on trends in land values, farm machinery dealers' sales and fertilizer sales. Although no one of these measures is a very reliable guide to the relative optimism of farmers, the three of them taken together do present a pattern corresponding to that anticipated above.

Land values crested in mid-1952 and then eased downward. They tend to move relatively slowly and to lag actual changes in farmer incomes. Nevertheless, they are indicative of the long-run price and profit expectation of farmers.

By contrast, farm machinery sales are more volatile, depending on the intermediate-term profit outlook of farmers. Many farm machinery purchases are postponable in the sense that farm production will not be reduced much if they are postponed. Thus, machinery purchases tend to drop if the farm profit outlook for the next few years is considered to be less attractive than it was previously.

Fertilizer purchases by farmers are not postponable in the same sense as farm machinery. That is, farm production will be reduced immediately and directly by a reduction in the use of fertilizer. Despite the drop in farm prices over the past three years, most farmers still are not using as much fertilizer as would be profitable. Hence we would expect that, in general, the long-time uptrend in fertilizer use will continue.

Cash in hand

However, the "cash in hand" factor is of importance. Farmers show a reluctance to borrow in a period of declining incomes even if the probability of realizing profit from the loan is quite high. In the preceding table this factor shows up especially in the case of Wisconsin which suffered the sharpest decline in cash receipts (8 per cent) for any of the District states from 1952 to 1953.

On the other hand, largely because of high hog prices, Iowa's cash receipts in 1953 actually exceeded the 1952 figure by 2 per cent. Thus we would expect a strong demand for fertilizer in that state, especially since it has been shown that fertilizer can be very profitable even in a drouthy year. Of course, corn acreage allotments also have encouraged increased fertilizer purchases in Iowa and Illinois, the two leading corn states.

TRANSPORTATION

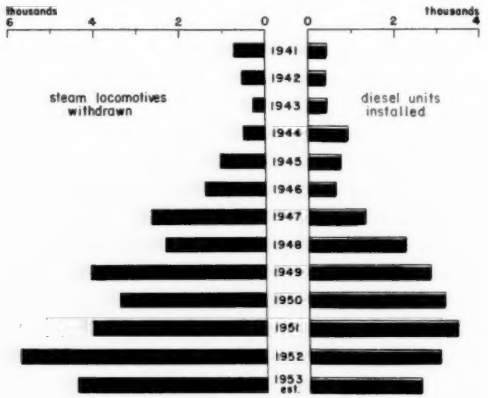
Railroad equipment buying slows, competition spurs roadway improvement

The nation's railroads in 1954 plan to add another 940 million dollars to the 9 billion they have spent since the war on new plant and equipment. This year's figure is 28 per cent below the 1.3 billion expended in 1953 and the smallest yearly total since 1947. Because business activity has been drifting downward, it is not surprising that the rails are slowing up their capital spending. The curtailment foreseen, however, is sharper than that reported for any of the other major industry segments, and it contrasts with a virtually unchanged total for all other industries as a group.

	1953 actual	1954 estimated	Change
	(million dollars)		
All industries	28,391	27,230	− 4%
Railroads	1,312	940	−28
All other	27,079	26,290	− 3

Capital outlay plans for 1954 were formulated in the light of generally satisfactory earnings and traffic experience during 1953.

Motive power change-over, a post-war development now past its peak



Total operating revenues of the Class I roads —which account for more than 95 per cent of all rail operations—inched upward from the year before to an all-time high of almost 10.7 billion dollars. An across-the-board boost in freight rates effective during only the last eight months of 1952 but in all of 1953 proved enough to offset a minor shrinkage in the physical volume of traffic. Income after operating expenses and taxes but before fixed charges was 1.1 billion, highest since the war years.

Downturn begins in late summer

The gradual tapering off in production by the nation's mines and factories that began in mid-1953 was not long in taking its toll in carrier traffic and earnings. By September, freight carloadings and gross revenues had begun to fall behind their year-before levels. The lag lasted through the rest of 1953 and has persisted so far this year.

Operating revenues for the first quarter were about 12 per cent lower than at the beginning of 1953. Since weekly carloadings in April and early May were running 15 to 20 per cent under the same weeks a year before, it is evident that the year-to-year decline in earnings continued on into the second quarter.

Compared with either the investment plans of other industries or the recent earnings and traffic experience of the railroads, the projected 28 per cent curtailment in carrier spending for new equipment and plant appears somewhat severe. Doubtless it owes more to circumstances peculiar to the rail industry than to the impact of a mild recession. When expected equipment and roadway expenditures are viewed separately, it becomes clear that this is true.

Sharp cutback in equipment buying

Reports received by the Interstate Commerce Commission from 126 of the 130 Class I carriers indicate that capital outlay for roadway purposes during the first half of 1954 will be little changed from a year ago. Spending for new equipment, on the other hand, is expected to be down 30 per cent. This averages out to a reduction of 21 per cent in total capital spending by these roads for the first half.

The factor mainly responsible for the anticipated shrinkage in equipment expenditure is a slackening in the rate of acquisition of new diesel locomotives.

Introduced during the middle Twenties, the new type of power at first caught on slowly. Twenty-five years after the first diesel switcher made its debut in the New York area, new steam switch engines were still being built. The first diesel passenger unit raced over the Burlington's Denver-Chicago line in 1934, and it was still later, on the eve of Pearl Harbor, that the diesel road freight unit made its initial appearance on the Santa Fe.

By the time the war began, the technical superiority of the new power had come to be rather generally—although not universally—recognized. But by this time, production controls stood in the way of wholesale conversion. In 1949, the new units for the first time piled up more locomotive hours in switching service and more car-miles in passenger service than their coal-burning rivals. During 1951 steamers fell behind the diesels in road freight operation, and by the end of the following year, 1952, diesels in all types of service ac-

tually outnumbered steam locomotives. At present, diesel power does a good four-fifths of all switching and passenger train work and three-fourths of the freight hauling. In 1953, for the first time in a century and a quarter, not a single new steam engine was ordered by any U. S. railroad.

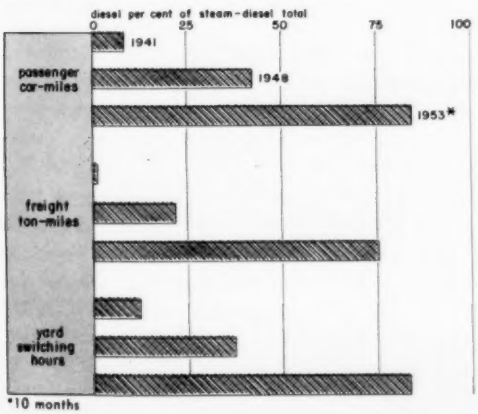
The iron horse goes to pasture

Steam locomotives on the rosters of the nation's railroads now number fewer than 12,000, about one-fifth the peak ownership during the early Twenties. All through the period since 1948, one after another of the railroads has retired its last steam engine. By now, at least half the Class I carriers have converted completely—largest to date being the Santa Fe—and a good many others are rapidly approaching the goal of total dieselization. Major roads in this area, in addition to the Santa Fe, on which the job has been finished are the Rock Island, Erie, Gulf Mobile and Ohio, Wabash, Chicago Great Western, Monon, Chicago and Eastern Illinois, Minneapolis and St. Louis, and the Michigan lines of the Chesapeake and Ohio.

The revolution in rail motive power then is drawing to a close. Only a small number of the Class I roads still make extensive use of steam locomotives. Among the few in the Midwest are the Illinois Central, the Nickel Plate and the Grand Trunk Western. On the others which have yet to take the final step—the North Western and the Milwaukee are examples—remaining units have been relegated to stand-by status, work train and extra service and suburban and branch line local operations. The ultimate retirement of these locomotives is inevitable, but it may well be a number of years before the last boiler grows cold.

Because only 12,000 steam locomotives remain, it is unlikely that retirements ever again will touch 1952's record of 5,700. By the same token, it seems improbable that the carriers will soon again install as many new diesel units as the 3,500 placed in service during 1951. Five or six thousand more diesels probably could supplant all the steamers still in use, with some rearrangement of schedules and operating practices. The dieselization program could be completed in the short span of two more years if only 3,000 new units were acquired annually.

Diesels' share greatest in passenger operation, but it has grown faster in freight service



Replacement demand

Four out of five diesel locomotives now in service have been installed since the war and are, therefore, less than eight years old. Experience with the new engines has been too brief to give a reliable indication of their probable service life. Even the oldest machines, for the greater part, continue in service. Some have been so extensively modernized they are substantially the same as new power. The practice of rebuilding old diesel units, which has become common, may tend to prolong almost indefinitely the service life of such equipment.

Emergence of a sizable replacement demand for diesels will have to wait until units acquired since the war begin to reach a stage of deterioration or obsolescence that cannot be cured by reconstruction. This time is not likely to arrive for some years to come.

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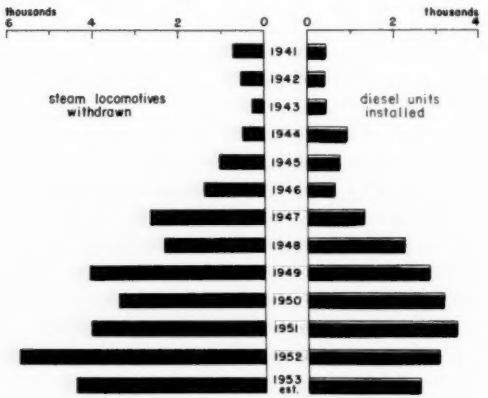
Motive power change-over, a post-war development now past its peak



Total operating revenues of the Class I roads —which account for more than 95 per cent of all rail operations—inched upward from the year before to an all-time high of almost 10.7 billion dollars. An across-the-board boost in freight rates effective during only the last eight months of 1952 but in all of 1953 proved enough to offset a minor shrinkage in the physical volume of traffic. Income after operating expenses and taxes but before fixed charges was 1.1 billion, highest since the war years.

Downturn begins in late summer

The gradual tapering off in production by the nation's mines and factories that began in mid-1953 was not long in taking its toll in carrier traffic and earnings. By September, freight carloadings and gross revenues had begun to fall behind their year-before levels. The lag lasted through the rest of 1953 and has persisted so far this year.

Operating revenues for the first quarter were about 12 per cent lower than at the beginning of 1953. Since weekly carloadings in April and early May were running 15 to 20 per cent under the same weeks a year before, it is evident that the year-to-year decline in earnings continued on into the second quarter.

Compared with either the investment plans of other industries or the recent earnings and traffic experience of the railroads, the projected 28 per cent curtailment in carrier spending for new equipment and plant appears somewhat severe. Doubtless it owes more to circumstances peculiar to the rail industry than to the impact of a mild recession. When expected equipment and roadway expenditures are viewed separately, it becomes clear that this is true.

Sharp cutback in equipment buying

Reports received by the Interstate Commerce Commission from 126 of the 130 Class I carriers indicate that capital outlay for roadway purposes during the first half of 1954 will be little changed from a year ago. Spending for new equipment, on the other hand, is expected to be down 30 per cent. This averages out to a reduction of 21 per cent in total capital spending by these roads for the first half.

The factor mainly responsible for the anticipated shrinkage in equipment expenditure is a slackening in the rate of acquisition of new diesel locomotives.

Introduced during the middle Twenties, the new type of power at first caught on slowly. Twenty-five years after the first diesel switcher made its debut in the New York area, new steam switch engines were still being built. The first diesel passenger unit raced over the Burlington's Denver-Chicago line in 1934, and it was still later, on the eve of Pearl Harbor, that the diesel road freight unit made its initial appearance on the Santa Fe.

By the time the war began, the technical superiority of the new power had come to be rather generally—although not universally—recognized. But by this time, production controls stood in the way of wholesale conversion. In 1949, the new units for the first time piled up more locomotive hours in switching service and more car-miles in passenger service than their coal-burning rivals. During 1951 steamers fell behind the diesels in road freight operation, and by the end of the following year, 1952, diesels in all types of service ac-

tually outnumbered steam locomotives. At present, diesel power does a good four-fifths of all switching and passenger train work and three-fourths of the freight hauling. In 1953, for the first time in a century and a quarter, not a single new steam engine was ordered by any U. S. railroad.

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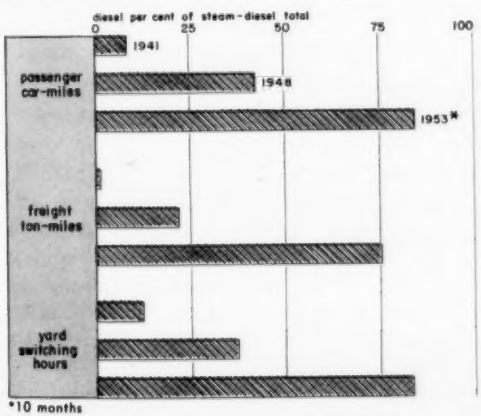

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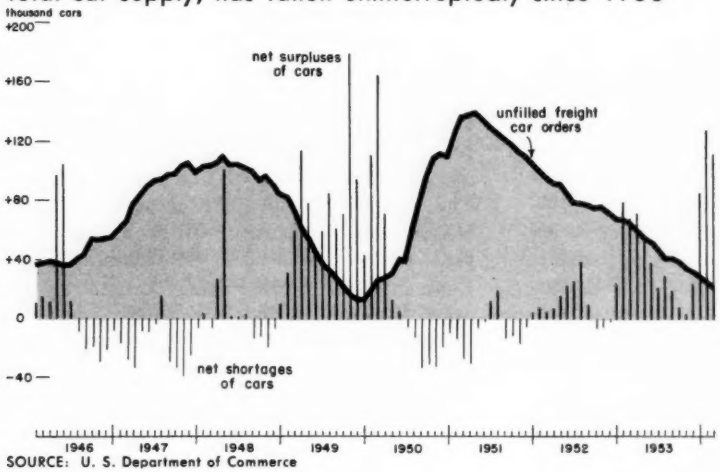
Freight car order backlog, sensitive to demands on total car supply, has fallen uninterruptedly since 1950



SOURCE: U. S. Department of Commerce

for other types of equipment or for roadway purposes will need to materialize if the carriers once again are to contribute to aggregate capital expenditure at anything like their pre-1954 rate.

Freight car buying dwindles

The number of carrier-owned freight cars in service on Class I railroads has held steady, at between 1.7 and 1.8 million, since before the war. Owing to a gain in average capacity per car, the aggregate capacity of freight equipment has risen from 83 million tons in 1940 to about 94 million tons last year.

Carrier ownership of freight cars still is short by about 75,000 of the 1,850,000 defense mobilization goal set for the end of 1954. The course of new orders during the past year or more gives reason to believe that the target will not be met. In no month of 1953, for example, were new orders for freight cars as great as current deliveries. As a result, order backlogs have fallen by more than two-thirds in a year's time, and on the first of April they amounted to only about 21,000—three months' production at the early 1953 rate.

In the period since 1950, when the ownership target was first proclaimed, car shortages have given way to substantial surpluses. Except for a few months in the fall of 1952, the daily average surplus has run considerably in excess of the reported shortage. This factor undoubtedly explains the evident disinclination of the carriers to sustain their present total car inventory, let alone to build it up further. A falling rate of spending for freight-carrying equipment, therefore, is another major factor accounting for this year's expected decline in total equipment outlay.

Roadway investment to hold up

Anticipated spending for new right-of-way facilities and structures is the bright spot in carrier capital outlay plans for this year. The dieselization program in large part is responsible for this. To accommodate the new power, modern shops and terminals are replacing old steam-locomotive servicing facilities. Longer passing tracks and improved signaling devices have to be provided if full advantage is to be taken of the diesel's operating characteristics. A portion of the spending on road investment projected for this year thus represents a concluding phase of the motive power change-over.

Construction stresses yard facilities

Within the year a number of important yard and terminal improvement projects have been started or carried toward completion. Notable examples in the Chicago area include the enlargement and modernization of the Milwaukee Road's yard at Bensenville, the rearrangement and improvement of the Burlington yard at Morton Park and the betterment of the facili-

ties at the Indiana Harbor Belt—New York Central yard in Blue Island.

The significance of new investment in such installations is not to be gauged solely from the dollar expenditure it entails. Emphasis on these facilities gives evidence of concern over the vexing problem of delay to traffic en route. Over the years the railroads have made conspicuous headway in speeding up train operations. Improved motive power and rolling stock, grade and curvature reductions and modern signaling and communication systems have done much to expedite the movement of traffic between terminals. Yet the delays associated with yard operations have largely prevented the carriers (and their shippers) from realizing the benefits lessened running time can provide. This has kept the rails at a competitive disadvantage in relation to their arch rivals, the trucks, which avoid almost entirely the time-consuming operations of classification and reassembly of traffic at intermediate points along the route.

Improving the efficiency of terminal yards, therefore, offers the railroads a way to capitalize upon steps they already have taken to expedite over-the-road operations. Installation of humps to permit switching of cars by gravity and of retarders to brake moving equipment mechanically rather than manually, coupled with the addition of radio and telephone communication within the yards, are among the improvements in design that have received particular emphasis.

Maintenance is investment

The physical plant of the railroad industry in a sense resembles the physical plant of the Federal Government. Both are vast in extent and comprised of multitudes of units of similar type. So numerous are the Government's post office structures, to take one example, that replacement of those that wear out or become obsolete is a fairly continuous process. The yearly cost of such replacement, therefore, can be treated as a routine operating expenditure. No especial advantage is to be gained by "capitalizing" this outlay and including depreciation accruals in yearly expenditure for operations.

The railroads, similarly, treat the cost of replacing worn-out rail and ties as part of operating expense. Owing to its similarity to outlay of a clearly investment character, spending for rail and tie replacement and for certain other maintenance items as well, therefore, needs to be taken into account in the appraisal of over-all carrier spending plans.

Yearly maintenance expenditures by the railroads appear to be closely geared to operating income and the volume of traffic. Since the war, expenditures for maintenance of way and structures by Class I roads have moved within the narrow range of 13.6 to 15.1 per cent of gross operating revenues. The 11 per cent decline in gross operating revenue during 1949 was accompanied by a fall of 4.7 per cent in outlay for roadway maintenance.

Total spending below 1953

Since rail traffic and revenues so far this year are down from 1953, spending for maintenance purposes undoubtedly has been running below last year's rate, although concrete evidence is lacking because 1954 data have not yet become available. As things stand now, the depressed level of earnings and the traditional practice of tying maintenance activity to income, coupled with a lowered rate of equipment purchase, suggests that the volume of total carrier spending during 1954 will have to be reckoned among the weaker factors in the business investment outlook for the year.

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Department store sales rise but fail to match excellent year-ago experience

Taking stock of economic conditions in the present usually entails looking back over the record of recent years. The charts below facilitate such longer-run comparisons. They represent the estimated physical volume of goods sold in department stores during the past four years. Sales are shown as percentage deviations from average daily sales in the three years 1947-49. The data are adjusted to eliminate usual seasonal changes.

The four cities and the U. S. exhibit the same general pattern. Sales reached abnormal highs in July 1950 and January 1951, which are explained by public reaction to the Korean war. Too much significance should not be attached to the general reversal in April 1954 of the nine-month downward trend. The seasonal corrections for March and April with the changing Easter date are unusually difficult to determine with certainty. The exceptionally large upturn in Detroit is due in part to the opening of new store facilities in that city.

Department store sales do a good job of reflecting short-term changes in a large segment of retail trade. Over the past four years, however, sales of these stores have not exhibited the physical growth which has characterized total retail sales and general economic activity during the same period.